

IN THE SPECIFICATION:

Please amend paragraph [0018] as follows:

[0018] FIG. 10A-B shows soluble antimicrobial activity on human skin. Human sweat was concentrated 50X and separated by HPLC on C18. a) Absorbance profile at 214 nm for eluted material from 35% to 60% acetonitrile, inset: complete absorbance profile of eluted materials. b) Ability of material eluted in Fig 1a to inhibit growth of *S. aureus* mprF is shown as diameter of zone of *S. aureus* mprF inhibition. Several antimicrobial fractions were detected. Mass spectrometry identified previously described antimicrobials; fractions labeled (1) and (3) are dermcidin and DCD-1L respectively (MW 4701, MW 4818, respectively) confirmed by N-terminal sequencing ((1): SSLLEKGLDGA (SEQ ID NO:30), (3): SSLLE (SEQ ID NO:31), (2): LL-37 identified by mass spectrometry (MW 4493) and immunoblot. Data representative of single experiment repeated 5 times with separate sweat preparations.

Please amend paragraph [0067] as follows:

[0067] A fusion construct comprising a peptide or polypeptide linked to a cathelicidin functional fragment of the disclosure can be linked at either the amino or carboxy terminus of the peptide. Typically, the polypeptide that is linked to the cathelicidin functional fragment is sufficiently anionic or cationic such that the charge associated with the cathelicidin functional fragment is overcome and the resulting fusion peptide has a net charge that is neutral or negative. The peptide or polypeptide linked to a peptide of the disclosure can correspond in sequence to a naturally-occurring protein or can be entirely artificial in design. Functionally, the polypeptide linked to a cathelicidin functional fragment (the "carrier polypeptide") may help stabilize the cathelicidin functional fragment and protect it from proteases, although the carrier polypeptide need not be shown to serve such a purpose. Similarly, the carrier polypeptide may facilitate transport of the fusion peptide. Examples of carrier polypeptides that can be utilized include anionic pre-pro peptides and anionic outer membrane peptides. Examples of carrier polypeptides include glutathione-S-transferase (GST), protein A of *Staphylococcus aureus*, two synthetic IgG-binding domains (ZZ) of protein A, outer membrane protein F of *Pseudomonas aeruginosa*, and the like. The disclosure is not limited to the use of these polypeptides; others suitable carrier polypeptides are known to those

skilled in the art. In another aspect, a linker moiety comprising a protease cleavage site may be operably linked to a cathelicidin functional fragment or variant of the disclosure. For example, the linker may be operable between ~~to~~ two domains of a fusion protein (e.g., a fusion protein comprising a cathelicidin functional fragment and a carrier polypeptide). Because protease cleavage recognition sequences generally are only a few amino acids in length, the linker moiety can include the recognition sequence within flexible spacer amino acid sequences, such as GGGGS (SEQ ID NO:12). For example, a linker moiety including a cleavage recognition sequence for Adenovirus endopeptidase could have the sequence GGGGGGSMFG GAKKRSGGGG GG (~~SEQ ID NO:28~~) (SEQ ID NO:29). If desired, the spacer DNA sequence can encode a protein recognition site for cleavage of the carrier polypeptide from the cathelicidin functional fragment. Examples of such spacer DNA sequences include, but are not limited to, protease cleavage sequences, such as that for Factor Xa protease, the methionine, tryptophan and glutamic acid codon sequences, and the pre-pro defensin sequence. Factor Xa is used for proteolytic cleavage at the Factor Xa protease cleavage sequence, while chemical cleavage by cyanogen bromide treatment releases the peptide at the methionine or related codons. In addition, the fused product can be cleaved by insertion of a codon for tryptophan (cleavable by o-iodosobenzoic acid) or glutamic acid (cleavable by *Staphylococcus* protease). Insertion of such spacer digonucleotides is not a requirement for the production of cathelicidin functional fragments, such oligonucleotide can enhance the stability of the fusion polypeptide.

Please amend paragraph [0103] as follows:

[0103] *Peptide synthesis.* Dermcidin, LL-37, RK-31, KS-30, and KR-20 peptides were commercially prepared by Synpep Corporation, Dublin, OR. Peptide amino acid sequences were

LLGDFFRKSKEKIGKEFKRIVQRIKDFLRNLVPRTES (LL-37) (SEQ ID NO:32),

RKSKEKIGKEFKRIVQRIKDFLRNLVPRTES (RK-31) (SEQ ID NO:27),

KSKEKIGKEFKRIVQRIKDFLRNLVPRTES (KS-30) (SEQ ID NO:22),

KRIVQRIKDFLRNLVPRTES (KR-20) (SEQ ID NO:17),

SSLLEKGLDGAKKAVGGLGKLGKDAVEDLESVGKGAVHDVKDVLD**SV dermeidin**)

(dermcidin)(SEQ ID NO:33). All 5 synthetic peptides were purified by HPLC and identity confirmed by mass spectrometry.